

IN THE CLAIMS:

Please add new claims 80-91 as reflected below. A complete listing of all claims and their status follows, which replaces and supercedes all prior claim listings.

Claims 1-32 (cancelled)

33. (previously added)      A method of introducing a fluent material into a disc space comprising the steps of:

creating an opening through the annulus fibrosis of a spinal disc in communication with the intradiscal space;  
sealing said opening; and  
introducing said fluent material through said seal directly into said intradiscal space.

34. (previously added)      The method of claim 33, wherein said fluent material is introduced through a tube placed through said seal.

35. (previously added)      The method of claim 34, wherein said seal is disposed within said opening.

36. (previously added)      The method of claim 35, wherein said seal is disposed on said tube.

37. (previously added)      The method of claim 34, further including the step of placing a cannula having a lumen therethrough into said opening and inserting said tube through said lumen.

38. (previously added)      The method of claim 37, wherein said seal is disposed within said lumen.

39. (previously added) The method of claim 38, wherein said cannula is configured to distract two vertebrae on opposite surfaces of said disc upon placement of said cannula into said opening.

40. (previously added) The method of claim 33, wherein the step of introducing fluent material comprises introducing the material under pressure.

41. (previously added) The method of claim 40, wherein the fluent material is a curable biomaterial introduced into said intradiscal space in liquid form.

42. (previously added) The method of claim 41, wherein said pressure is substantially maintained until the biomaterial is cured.

43. (previously added) The method of claim 40, further comprising the step of providing a vent in communication with said intradiscal space and introducing the biomaterial into said intradiscal space until the biomaterial seeps from said vent.

44. (previously added) The method of claim 43, further comprising the step of closing said vent upon seepage of biomaterial from the vent to thereby increase the pressure of biomaterial in the disc space.

45. (previously added) A method of restoring disc height between two opposing vertebral bodies of the spine, comprising the steps of:

creating an opening through the disc annulus fibrosis in communication with the intradiscal space;

distracting the vertebral bodies apart to a selected spacing approximating natural disc height;

sealably introducing a curable biomaterial through said opening directly into the intradiscal space until the intradiscal space is substantially filled; and

maintaining the vertebral bodies in distraction until the biomaterial is substantially cured *in situ*.

46. (previously added) The method of claim 45, further including the step of removing at least a portion of the nucleus pulposus of the disc.

47. (previously added) The method of claim 45, further including the step of removing substantially all of the nucleus pulposus of the disc.

48. (previously added) The method of claim 45, wherein the step of sealably introducing the curable biomaterial comprises introducing the biomaterial under pressure.

49. (previously amended) The method of claim 48, wherein the step of sealably introducing the biomaterial into the intradiscal space includes placing a seal adjacent said opening and causing fluent material to flow through said seal.

50. (previously added) The method of claim 49, wherein pressure is substantially maintained until the biomaterial is cured.

51. (previously added) The method of claim 45, wherein the distraction step is performed prior to the step of introducing the curable biomaterial.

52. (previously added) The method of claim 45, wherein the distraction step is performed by a separate distractor.

53. (previously added) The method of claim 52, wherein said distractor is a cannulated distractor having a lumen in communication with the intradiscal space.

54. (previously added) A device for sealably introducing fluent material directly into the disc space through an opening formed through the annulus fibrosis of said disc, comprising:

a seal for cooperatively engaging said annulus fibrosis adjacent said opening for sealing said opening; and

a tube having a passageway for the flow of fluent material therethrough, said tube being configured for cooperative sealed engagement through said seal.

55. (previously added)      The device of claim 54, wherein said tube is defined by a cannula having an interior lumen extending therethrough.

56. (previously added)      The device of claim 55, wherein said seal is disposed on the said cannula.

57. (previously added)      The device of claim 56, wherein said seal is integral with at least a portion of said cannula.

58. (previously added)      The device of claim 56, wherein said seal is a separate component disposed on said cannula.

59. (previously added)      The device of claim 58, wherein said seal comprises a plurality of elastomeric rings.

60. (previously added)      The device of claim 59, wherein said cannula is configured to distract vertebrae adjacent to the disc space.

61. (previously added)      The device of claim 54, wherein said seal is configured for disposition in said opening.

62. (previously added)      The device of claim 61, wherein said seal includes a cannula separate from said tube, said cannula having an interior lumen through which said tube extends in use, said exterior of said cannula being configured to securely fit into said disc opening.

63. (previously added)      The device of claim 62, wherein said seal includes a sealing element disposed in said lumen.

64. (previously added) The device of claim 63, wherein said sealing element comprises an elastomeric ring support in said lumen and configured for fluid-tight engagement with said tube.

65. (previously added) The device of claim 55 further including a vent extending through said cannula for communicating with said disc space.

66. (previously added) A device for sealably introducing fluent material directly into the disc space through an opening formed through the annulus fibrosis of said disc, comprising:

a generally elongate cannula having a proximal end and an opposing distal and lumen extending therethrough for the receipt and passage of fluent material, said distal end being configured for entry into said opening in said annulus fibrosis; and

a seal on said cannula at said distal end thereof, said seal being configured for sealably engaging the surface of said annulus fibrosis defined by said opening to provide a seal thereat.

67. (previously added) The device of claim 66, wherein said seal is integral with at least a portion of said cannula.

68. (previously added) The device of claim 66, wherein said seal is a separate component disposed on said cannula.

69. (previously added) The device of claim 66, wherein said distal end of said cannula is defined by an insertion tip configured for facilitating entry into said opening.

70. (previously added) The device of claim 69, wherein said insertion tip is separable from said cannula.

71. (previously added) The device of claim 70, wherein said seal is disposed on said insertion tip.

72. (previously added) The device of claim 69, wherein said insertion tip is configured to engage end plates of opposing vertebrae upon insertion into said opening and to distract said vertebrae.

73. (previously added) A device for distracting two adjacent vertebral bodies defining a disc space therebetween and for delivering a flowable material into the disc space, comprising a body including a proximal portion, an opposite distal portion defining a shape adapted to distract the disc space, and a first longitudinal passageway extending through the body and defining a first opening in the distal portion opening into the disc space.

74. (previously added) The device of claim 73 wherein:  
the passageway further defines an injection port in the proximal portion of the body; and  
the device further comprises an injection device having a port attached to the injection port.

75. (previously added) The device of claim 74 wherein the injection device is a syringe.

76. (previously added) The device of claim 73 wherein the shape adapted to distract is adapted to distract upon insertion into the disc space.

77. (previously added) The device of claim 76 wherein the shape adapted to distract has a width and a height, wherein the width is greater than the height

78. (previously added)      The device of claim 76 wherein the shape adapted to distract is adapted to distract upon insertion into the disc space and then rotation in the disc space.

79. (previously added)      The device of claim 73 wherein the shape adapted to distract is removable.

80. (new)      A kit of parts for sealably introducing fluent material directly into the disc space through an opening extending through the annulus fibrosis of said disc, comprising:

    a tube having a passageway for the flow of fluent material therethrough and an extent adapted to be received in the opening of said annulus fibrosis, said tube having a seal adapted to engage said annulus fibrosis adjacent said opening and to form a fluid-tight seal therewith; and

    a quantity of fluent material adapted to be introduced into said disc space through the passageway of said tube.

81. (new)      The kit of parts according to claim 80, wherein said seal is integral with said tube.

82. (new)      The kit of parts according to claim 80, wherein said seal is a separate component mounted on said tube.

83. (new)      The kit of parts according to claim 80, further including a vent adjacent said tube and adapted to communicate with said disc space.

84. (new)      The kit of parts according to claim 80, wherein said fluent material is a curable biomaterial.

85. (new) The kit of parts according to claim 80, wherein said tube extent is defined by the distal tip of said tube, said distal tip being configured to provide distraction of opposed vertebrae communicating with said disc space.

86. (new) The kit of parts according to claim 85, wherein said distal tip comprises at least one orifice communicating with said passageway to provide an exit path for said fluent material into said disc space.

87. (new) The kit of parts according to claim 85, wherein said distal tip is removable from said tube.

88. (new) The kit of parts according to claim 87, wherein there are a plurality of removable distal tips, each being of different size.

89. (new) The kit of parts according to claim 87, wherein said distal tip is formed of bioresorbable material.

90. (new) The kit of parts according to claim 80, further including a syringe adapted to inject said fluent material into the passageway of said tube.

91. (new) The kit of parts of claim 80, wherein said seal is adapted to reside within said opening of said annulus fibrosis.